Creating Talent Development Schools in which All Students Succeed

CRESPAR Models Built with Collaborating Schools are Making a Difference at Elementary, Middle, and High School Levels

The Center for Research on the Education of Students Placed At Risk (CRESPAR), co-directed by Robert E. Slavin at Johns Hopkins University and A. Wade Boykin at Howard University, has a straightforward mission—to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk.

What does it mean to "transform" schooling? To CRESPAR, it means schools need to change from places that sort and classify children to places that help all children succeed in demanding curricula. This can be accomplished in Talent Development schools—schools that hold all students to high standards but provide multiple pathways and research-based practices that ensure their success.

The research, development, evaluation, and national dissemination of Talent Development Schools at all levels—elementary, middle, and high school—is a major CRESPAR commitment. In this ***REPORT***, we present the essential components of the Talent Development High School and the Talent Development Middle School, along with early evaluations of effects on student outcomes in schools where these models are being developed. We also present the components and evaluations to date of Success for All and Roots and Wings, which exemplify the Talent Development model at the elementary school level.

THE TALENT DEVELOPMENT HIGH SCHOOL: Essential Components

In *The Talent Development High School: Essential Components,* CRESPAR researchers Velma LaPoint and Donna Penn Towns (Howard University), and Will Jordan and James M. McPartland (Johns Hopkins), describe the essential components of the Talent Development High School and present the rationales and research upon which each is based. The researchers describe the components under two key headings: the curriculum and the learning environment. But they first note an important point—the Talent Development High School, unlike many schoolwide innovations, is based not only on research-based principles that guide school improvement, but also on specific organizational and curricular components that schools can apply to operationalize the principles. Thus the Talent Development model "provides a comprehensive package of specific high school changes [in school organization, social relations, and instruction] for students placed at risk, based upon research on student motivation and teacher commitment, that can be reliably implemented with adaptations to meet local circumstances."

The Talent Development High School components include a common core curriculum based on high standards—all students take college-preparatory courses in the major subjects of English, mathematics, science and history/social studies. Separate program tracks—college prep, general and vocational-business—are eliminated, replaced by a single core academic program of demanding courses for all students.

Achievement in this demanding curriculum by all students is accomplished through the creation of a learning environment that motivates all students and provides teachers with the resources and abilities to meet the demands of providing a good education to diverse students. The components of this learning environment are research-based, having been identified through reviews of both quantitative and qualitative research on high schools and students.

The components include relevant schoolwork that focuses on careers, the development of a human learning community, the provision of opportunities for academic success, and the provision of assistance to students in handling their personal and out-of-school problems.

Relevance of Schoolwork

The Talent Development High School reorganizes schoolwork around several broad career themes and provides students with a choice of one of several career academies in which they will spend their last three years of high school. The themes of the career academies are developed by the school's own faculty, based upon strengths and interests of the teaching staff, actual job opportunities and trends, and coverage of some broad career categories.

All the academies are college-preparatory with demanding standards. All students select and attend an academy in the tenth through twelfth grades. Each academy exists as a school-within-the-school. Students are prepared for their academy choice in the ninth grade. They take interest inventories that help them identify their own strengths and career interests, enroll in course units on career types and pathways, and attend

presentations and discussions by faculty.

The career academies use employer advisory boards to develop a curriculum of elective courses, internship learning opportunities, and basic academic courses that blend career academy themes into their learning activities and applications.

LaPoint, Towns, Jordan, and McPartland note that the career academy themes "give focus to a student's high school program by encouraging student career planning and tying curriculum content to each student's career plans."

Human Learning Community

The Talent Development High School creates conditions for close positive teacher-student relations and for an orderly academic climate through several related reforms.

Each career academy exists in its own part of the school building, with a separate entrance and stairway areas. The maximum size of each career academy is 300-350 students and the maximum size of ninth grade teams is 150-180 students. Thus, the teaming in the ninth grade and the career academies in the last three grades very effectively create a set of small high schools operating where one large comprehensive high school used to be.

A four-period day replaces the previous six-or seven-period day, providing longer classes for more in-depth instruction and requiring fewer adult-student relationships. Teachers now need to get to know fewer different students (about 90 individuals); students now deal with fewer teachers; thus teachers and students can form stronger interpersonal relationships.

Special adult advisory and advocacy relationships are established to give each student access to a specific caring and problem-solving adult who serves as that student's point of contact in the school. In the ninth grade academy, which is often much larger than any upper-level career academy, several interdisciplinary teams of teachers are formed, each of which shares the same block-scheduled group of students. These teams include a homeroom teacher who has the first period with each class, plus three other teachers who share the same daily planning period to address student and team problems.

In the upper-level academies, each teacher is given a homeroom group of tenth, eleventh and twelfth graders that meets daily and that remains intact for each student's remaining years in high school. These homeroom teachers function in advisory and advocacy capacities for their individual students as they face problems or decisions across the upper high school grades.

In the Talent Development High School, teacher roles and responsibilities are also modified to foster more positive teacher-student relations around shared academic goals. The role of the teacher is shifted from evaluator to coach by using external departmental exams, not constructed by any single teacher, as a major criterion for student grades in each course.

Opportunities for Academic Success To be sure that all students are able to succeed in a demanding curriculum based on high standards, the Talent Development High School focuses on improving student attendance, giving students extra academic help as needed, providing recognition for student improvement, and providing mechanisms for students to recover from previous poor attendance or earlier failures.

Addressing attendance. Attendance is a major facet of opportunity to learn—you can't learn if you're not there. The Talent Development High School reaches out specifically in a personal way to students when they first begin to have attendance problems. Personal calls to the home are addressed at first to the student (not

the parent) to deliver an initial message of positive outreach rather than punitive sanctions.

LaPoint, Towns, Jordan, and McPartland point out that "Having an instructional program that is attractive and engaging to students is the ultimate source of producing good student attendance." However, initial direct and personal approaches are necessary in most high schools to begin improving attendance while career academies and active instructional programs are being developed and implemented.

Extra Help When Needed. The Talent Development High School is flexible in its use of various resources to meet the diversity of student needs. Approaches include coaching classes before or after regular school hours, peer tutoring via cooperative learning activities in the regular classroom or as pullout activities, extra computer drill and practice during or outside the regular school day, smaller classes or longer periods for students who are most behind (while maintaining all core curriculum elements), and double periods of time in demanding courses.

Recognition for Improvement. The Talent Development High School uses a modified report card that gives credit for achievement measured according to general standardized criteria and improvement measured according to a student's own starting point.

Recovery Methods. The Talent Development High School gives students who do not at first succeed another chance to earn passing grades or to earn course credits. The researchers note that recovery always entails "extra cost," which encourages students to try to succeed on their first efforts. Mechanisms are provided for students to recover from poor attendance records (by recording better attendance), from poor course performance (by retaking courses at Summer School, Saturday School, or Credit School), and from failure to be promoted (by earning missing credits during the first 18-week term of a four-period day schedule.

Help with Personal Problems

The Talent Development High School provides assistance to students through social workers and mental health professionals on the school staff and through an alternative after-hours school in the building. This alternative—the "Twilight School"—holds classes in the basic academic subjects with a small teacher-student ratio (10 to 1) and includes training students in coping skills. Twilight School attendance is temporary, as the school prepares students to return to the regular school or to continue their education at another part-time or GED location. ■

TALENT DEVELOPMENT MIDDLE SCHOOL: Essential Components

Serge Madhere (Howard University) and Doug Mac Iver (Johns Hopkins University) are leading the CRESPAR work on the Talent Development Middle School. They describe the Talent Development approach as being based on the belief that all students can learn challenging material if the right types of support are given. In *The Talent Development Middle School: Essential Components,* they identify the components and present the research they are derived from, and summarize how they have begun to be fleshed out at Central East Middle School in Philadelphia and at Evans Junior High School in Washington, D.C.

The work at Evans Junior High School in Washington, D.C., led by Madhere, and at Central East Middle School in Philadelphia, led by Mac Iver, illustrates how the essential components of the Talent Development Middle School are implemented and adapted based on the needs and strengths of the local school and district. At the same time, the complementary work allows the Hopkins and Howard middle school researchers to evaluate selected components in both schools at once while evaluating other components in only one school or the other.

Evans Junior High School in Washington, D.C. is a regular junior high school, grades 7 to 9, located in a low socioeconomic area of the city. The school enrolls approximately 320 students, all of whom are African American. Enrollment is highest in the seventh grade (116 students), next in the eighth grade (91 students), and lowest in the ninth grade (78), and 35 students are in an ungraded program. Approximately 25 percent of the students receive Title I services and about six percent are in special education. A small percentage of students speak a language other than English at home. The school's 29 teachers (12 male and 17 female) are all African American.

Central East Middle School in Philadelphia includes approximately 1,000 students in grades five through eight, mostly from low socioeconomic backgrounds. The school has a highly diverse student body—about 45 percent Hispanic (most of Puerto Rican descent), 24 percent African American, 13 percent Asian (mostly Cambodian and Vietnamese), 8 percent white, and 10 percent who identify themselves as belonging to other racial or ethnic groups, including Arab American and biracial. Many have parents who are immigrants. About 53 percent spoke a language other than English at home before they began attending school. In the following, we describe how Evans and Central East are imple-

EIGHT FUNDAMENTAL COMPONENTS OF THE TALENT DEVELOPMENT MODEL

- **Demanding curriculum aimed at active student learning.** For all students, the core curriculum is demanding, focusing on higher order competencies, and utilizing technologies appropriate to these goals;

- **Emphasis on cultural empowerment.** Instruction must be attentive to cultural patterns and norms, promote cultural literacy, and help students connect to and interpret cultural traditions;

- **Communal organization of school.** The school must be organized as a community to support stronger teacher-student bonds and address adolescents' needs for affiliation;

- **Total detracking of instruction.** Classroom organization replaces tracking with approaches that make student diversity in the classroom an asset rather than an impediment to learning and motivation;

- **Growth-oriented assessment.** The model for accountability and evaluation that teachers use in the classroom combines ratings of both excellence and progress, so it can be successfully used with heterogeneous groups.

- **Multi-layered pedagogy.** This includes flexible use of time and resources to prevent course failures and grade retentions and to nurture students' talents;

- **Career exploration.** This calls for ongoing occupational exploration and goal-setting activities that use appropriate role models and future-oriented exercises. It also involves guidance experiences that encourage students' college aspirations and provide them with information about the realistic steps toward different secondary and postsecondary options; and

- **Family affirmation.** This goes beyond the traditionally loose connection between home and school to involve new forms of partnerships with parents and the community to coordinate learning activities and reinforcements in each setting.

menting some of the essential components.

Demanding Curriculum Aimed at Active Learning

Evans Junior High School is implementing a common curriculum for all students that includes a weekly lab period in each major subject. The curriculum emphasizes a constructivist approach to instruction and encourages extensive use of technology. The school is using the ***Literacy through Film*** program, which promotes writing across the curriculum, literature reading, and open discussion of high-level questions. The films that are used portray events and people that influenced African-American history, and tie math and science to themes that are highly interesting to young adolescents.

At Central East Middle School, all students are enrolled in high-track curricula in math, science, and social studies. Reading, literature, and language arts are covered as one subject.

Communal Organization of School

In too many middle schools, note Madhere and Mac Iver, "the teachers don't know the students, the students don't know the teachers, and there is no genuine opportunity for close, enduring student-teacher bonds to develop."

Evans Junior High School is making organizational changes that address students' needs for affiliation and help them see themselves as a community of learners. For example, in student-teacher grade-level weekly assemblies, students are publicly recognized for performance, behavior, and progress; are provided with strategies to help them cope with different situations; and are able to relate and discuss events or concerns that occurred during the week. The school also plans to integrate English, language arts, and reading courses, which will allow stronger bonds to develop between students and teachers—students will see one fewer teacher each day, and each Reading/English teacher will be responsible for about 50 less students each day. At Central East Middle School, which has established a semi-departmentalized, interdisciplinary team core program, each student receives all his or her academic instruction from a two- or three-person interdisciplinary team—thus each student has greater opportunities to form stronger personal relationships with his or her teachers. Likewise, teachers are responsible for only 66 to 99 students each year, rather than the 165 or so they would have under full departmentalization, so they can form stronger relationships with their students. In many cases, the teacher interdisciplinary teams and their students stay together for more than one year, further promoting the building of strong relationships.

...you run into "certain predictable challenges."

Detracking of Instruction

When you replace tracking with heterogeneous classrooms in which students work with a demanding higher-order curriculum, according to Madhere and Mac Iver, you run into "certain predictable challenges." Some students will need frequent extra help within the classroom. Accountability measures need to motivate students by recognizing improvement. Peer support for achievement needs to replace anti-academic norms.

At both Evans Junior High and Central East, the use of cooperative learning instructional methods is a key to meeting these predictable challenges. These methods encourage help when needed from classmates, use improvement measures to show student growth in achievement, and encourage peer support for academic achievement of all students. Cooperative learning is being implemented at Evans in the fall and is well underway at Central East in the form of the Student Team Reading and Student Team Writing programs. (Early results of the Student Team Reading program at Central East are described later.)

The Talent Development Middle School approach to student evaluation is designed to move low-achieving students step by step into the realms of higher achievement even as they confront tougher core curriculum classes. Focusing on meaningful improvement goals, this approach challenges all students with attainable goals, rewards them when they achieve the goals, and motivates them to achieve higher goals.

Guidance Experiences and Career Exploration

A Career Exploration/College Exploration program has begun at Evans Junior High School. Students have received a package that includes copies of the ***College Digest*** and a booklet on occupational interest exploration. This spring, students will complete a full self-assessment inventory of their interests and skills, using the ***Self-Directed Search*** interest inventory and other instruments. This will be followed by a series of follow-up activities.

Advisors of 6th- and 7th-graders at Central East Middle School have begun leading their students through a series of specific lessons from the Talent Development Middle School's ***Career Exploration and Educational Decision-Making Course***. The course helps students engage in systematic self--assessment, make career and educational plans, gather occupational information, interview representatives of a wide variety of careers, identify suitable high school programs, and explore a wide variety of occupations.

Multi-Layered Pedagogy

Madhere and Mac Iver note another predictable challenge: Schools that institute a demanding core curriculum for all students need to "provide additional

support for students whose current proficiency is considerably below that of their classmates."

At Central East Middle School, struggling students receive a substantial extra dose of instruction: these students are given an extra period of math or reading each day for ten weeks instead of their regularly scheduled electives.

Evans Junior High School has initiated an after-school tutoring effort called "Yes to Success," to address a specific goal—preparing students in need for the upcoming administration of the CTBS.

Emphasis on Cultural Empowerment

Madhere and Mac Iver note a central operating assumption underlying the Talent Development framework: "...we must always begin with the assets that students, families, and communities bring to the educational process." The programs and practices of Talent Development schools "respect and are sensitive to the integrity of individual children and the cultures from which they come."

Both Evans and Central East are implementing cooperative learning, not only because of its research-based effects on achievement, but also because of its congruence with African American and Hispanic modes of learning. Both Evans and Central East also feature a pervasive use across the curriculum of literature and films whose authors and producers represent a wide variety of different cultures and groups.

Expectations for the Talent Development Middle School

Central East Middle School and Evans Junior High School have begun, in the 1995-96 school year, to implement the essential components of the Talent Development Middle School. These schools are already, according to Madhere and Mac Iver, "recognizably different from schools operating under the traditional 'sorting' paradigm." They will become more different as the researchers and the school staffs collaborate over the next two years to complete the development of the model and evaluate the outcomes for students.

As the work proceeds, Madhere and Mac Iver expect to help schools in Philadelphia, other interested schools and, within five years, begin to move the Talent Development Middle School into use nationwide.

TALENT DEVELOPMENT MIDDLE SCHOOL: *Implementation and Effects of the Student Team Reading Program*

The implementation and outcomes of the many Talent Development Middle School components that are underway at Evans and Central East will be evaluated closely in comparison to control schools. Early implementation and outcome data have already been collected to examine the beginning effects of the Student Team Reading program at Central East.

Teachers at Central East Middle School received training in the use of Student Team Reading in the summer of 1995 and began implementing the program in September. In February 1996, Mac Iver and his colleague Stephen Plank collected data about the degree of implementation and data on outcomes through the first semester for Central East and for its control school.

The Student Team Reading (STR) program, Mac Iver and Plank note, "changes both the instructional processes and the curriculum in middle grades reading, English, and language arts to create a conducive motivational climate...." They analyzed their semester's worth of implementation and outcome data to see if, first, Central East teachers in reading, English, and language arts (RELA) classrooms were implementing STR and, second, if that implementation actually produced RELA classrooms where peer support for achievement is high, where student-teacher relations are positive, where students give their best and work hard to master the content and meet adults' standards, and where students are confident both in their ability to learn and in the future utility of what they are doing.

All of this is a tall order for a semester's worth of program implementation. But the analyses of survey responses from Central East (918 students from 34 RELA classes) and from the control school (858 students from 38 RELA classes) found significant effects of the Student Team Reading program on the motivational climate at Central East.

First, Mac Iver and Plank needed to determine that Central East teachers were implementing STR but control school teachers weren't—not as clear-cut an issue as it sounds, because many Philadelphia schools use cooperative learning methods in their classrooms. In fact, one of the teachers in the control school used STR more frequently than any other teacher in any school. Nonetheless, the researchers found that implementation of STR was markedly greater at Central East on average.

Mac Iver and Plank then analyzed their survey data to determine effects of STR on ten measures of student perceptions —peer support for achievement, teacher caring, working to meet adult standards, the value of RELA classes for the future, effort, self-concept of ability, giving one's best, the intrinsic value of RELA classes, anti-academic norms, and teachers' respect for students.

Although STR had been implemented only for one semester, the use of the program was positively and significantly related to the first seven of the above ten outcomes. The significant effects ranged from about one-third to two-thirds of a standard deviation.

Thus the analyses of the effects of STR, Mac Iver and Plank note, indicate that the program's use will "help Central East Middle School create ideal classroom conditions for developing the academic talents of middle school students...."

The researchers will continue to analyze STR effects (as well as effects of other components and the overall Talent Development model) as their work progresses at Central East.

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THE TALENT DEVELOPMENT HIGH SCHOOL: Early Evidence of Impact

The first Talent Development High School was established in September 1995 at Patterson High School in Baltimore, Maryland. The model at Patterson incorporates career-focused academies for the upper grades, a ninth-grade academy with teams of teachers and students, and other key Talent Development components.

Patterson High School enrolls about 2,000 students, of whom about 60 percent are African American, 30 percent white (mostly living in white ethnic neighborhoods of Greek, Polish, and Italian heritage) and 10 percent American Indian, Asian, and Hispanic. The school is non-selective and geographically zoned; thus it receives all the students within its boundaries who do not gain admission to one of the district's three citywide high schools or three voca- tional-technical high schools, all of which have entrance requirements based on grades, tests, and attendance.

Patterson was one of the first two high schools cited in 1994 by the Maryland State Department of Education as "eligible for reconstitution" because of its low rankings and negative trends on dropout rates, student attendance, and student achievement. This designation is tantamount to saying that Patterson was one of the two worst high schools in the state of Maryland in 1994. The school's problems included the following:

- The school learning environment was in chaos. Small groups of unruly students were constantly roaming halls and stairways, and repeated faculty efforts to bring order to the building were unsuccessful. Teachers, unable to maintain peace in the halls, retreated to their classrooms where they tried to do their best with the students in their own rooms. Student attendance and tardiness were serious problems.

- The rate at which students failed courses and were retained in grade was enormous. In 1993-94, over 80 percent failed the ninth grade (4 out of 5 students were ***not*** promoted to grade 10). Course failure and grade repetition, of course, feed a high dropout rate—Patterson enrolls over 600 new ninth graders each year, but has graduating classes well under 200.

- Student test score performance was also poor on the Maryland minimum competency tests in math, writing and citizenship, which are required for graduation. The math test is actually intended to be passed in the seventh or eighth grade, but only about one-quarter of Patterson students have done so by the end of the ninth grade.

In this context, Patterson administrators and staff and CRESPAR researchers and staff at Johns Hopkins—James M. McPartland, Nettie Legters, Will Jordan, Leslie Jones, and Edward L. McDill— began a collaboration in November 1994 to create the first Talent Development High School.

Components Implemented at Patterson

During the 1994-95 school year, Patter- son planned and prepared to implement a large number of the components of the Talent Development High School. In September 1995, and continuing through the 1995-96 school year, the transformation of the school began in earnest.

The most dramatic organizational change was the establishment of five academies, each a self-contained school within the school. The ninth grade is housed in one wing of the building as "The Ninth Grade Success

Academy," with its own entrance and classrooms (including computer and science labs). The ninth grade has its own Academy Principal, Academy Leader, and a teaching faculty that is divided into five teams, each of which teaches a common group of 150-180 students in a four-period block schedule. Each team has a common planning time each day to work together on student and instructional issues.

Four college-preparatory but career-focused academies were designed by Patterson staff for the upper-level (grades 10-12) students. The academy themes were generated by drawing on and combining multiple proposals submitted by Patterson faculty members or groups of faculty. The four upper-level career academies are Arts and Humanities, Business and Finance, Sports Studies and Health/Wellness, and Transportation and Engineering Technology. Like the Ninth Grade Success Academy, each upper-level Career Academy has its own entrance and area of the building, and its own faculty and administrators.

Other Talent Development components at Patterson include:

Homeroom advisory groups and the four-period day in the upper-level career academies.

Improvement Grades and Credit School in the Ninth Grade Success Academy.

Methods for recovering from poor attendance.

Voluntary coaching classes before and after school for students who need extra help.

A full-time professional health suite and a staff of social workers, school psychologists, and guidance counselors.

Regular instruction and discussions by Patterson staff on topics of teenage sexuality and drug or alcohol issues.

Twilight School for students who have serious discipline problems.

Early Evidence of Impact

McPartland, Legters, Jordan, and McDill present early evidence of the impact of the Talent Development High School by comparing conditions at Patterson in the 1994-95 school year with conditions in 1995-96. The comparisons are drawn from faculty surveys about climate and teaching conditions, student attendance rates by grade level and month, and report card grades and course credits through the first 18-week term of 1995-96. In brief, school climate, student attendance, and student promotion at Patterson High School have all significantly improved in school year 1995-96 with the implementation of the Talent Development model.

School Climate. There has been an almost complete turnaround in teacher perceptions of the learning environment. Last year, almost all of the Patterson teachers (80 percent of grade nine teachers and 86.7 percent of upper grades teachers) believed the school's learning environment was ***not*** conducive to school achievement for most students. This year, only 27.2 percent of grade nine teachers and 4.5 percent of upper grades teachers feel this way.

Other analyses of survey data show the following teacher perceptions:

School spirit of faculty and administration—79.2% of teachers say better than last year

Students taking school seriously—81.2% of teachers say better than last year

Teachers working together—83% of teachers say better than last year

Student behavior in halls & stairways—94.4% of teachers say better than last year

This school seems like a big family: grade 9—45.5% agree, compared to 13% last year; upper grades—54.5% agree, compared to 13.7% last year.

Attendance. Patterson shows significantly higher rates of ninth-grade attendance compared to recent previous years. The upper-level Career Academies, which started out with higher base rates of previous attendance, also show some improvement this year.

McPartland, Legters, Jordan, and McDill examine monthly student attendance rates for this year (1995-96) compared to the average of the previous three years at Patterson High School. The ninth grade, which has had the poorest attendance in recent years of any grade in the school, has improved attendance by 9.4 percentage points since the beginning of the year. Schoolwide, attendance is up 6.1 percentage points over the average of the past three years (from 71.6 to 77.7).

Patterson teachers agree that the school is moving in the right direction in improving attendance. Last year, almost all Patterson teachers—96 percent of ninth- grade teachers and 97.8 percent of upper-grades teachers—indicated that absenteeism was a serious problem. This year, those numbers have dropped substantially, to 45.5 percent of ninth-grade teachers and only 19 percent of upper- grades teachers.

McPartland and his colleagues also compare attendance at Patterson with attendance at the eight other Baltimore City non-selective high schools. Here they find that Patterson has moved from second worst in attendance in 1994-95 to second best in attendance in 1995-96.

The researchers note that "The improvements in attendance so far have been produced by a safer school climate and especially by the efforts of teachers in regularly phoning students who miss school." They expect further improvement to come about as "...Patterson's teachers become more comfortable at using technology, project-based learning, cooperative learning and other methods to more actively involve students in challenging learning activities...."

Student Promotion. The researchers compare Patterson promotion rates at the end of school year 1994-95 with predicted promotion rates at the end of school year 1995-96. The predicted promotion rates are based on first-term course grades received by Patterson students in 1995-96.

Of ninth-grade students, 47.3 percent earned promotion the previous year, but 69.1 percent are poised for promotion this year, based on passing most of their courses in the first term.

McPartland, Legters, Jordan, and McDill note that: "...being left back to repeat a grade is the first decisive step in the dropout process. Improvements in promotion rates, especially from grade 9 to 10 where many students are currently lost, are critical for reducing the dropout rate."

Expectations for the Talent Development High School Model

These early results, the researchers note, indicate that one of the worst high schools in an urban district, designated for reconstitution by the state, is well on its way to becoming a very good school in the very first year of its operation as a Talent Development High School. The teachers and administrators of Patterson High School have been able to turn their school around in terms of the climate for learning. They have also significantly improved student attendance and the probabilities of student promotions and graduations—enough so that next year they will need to add a fifth upper-level Career Academy to accommodate the greater numbers of students who are attending school regularly and earning promotion to the next grade.

In the remainder of this year and in next year and beyond, the curriculum and learning activities will be further improved to incorporate career themes and to present more engaging lessons. Plans are in place to add more Talent Development High School sites at the beginning of the 1996-1997 school year—sites that will apply the lessons learned and practices developed at Patterson and, with Patterson, will create the basis for moving to national dissemination. ■

First-Grade Sorting Begins Life in the Low Track through Elementary and Middle School

Current schooling systems identify first-graders who are not doing well enough academically and place them in special education, place them in low first-grade groups, or retain them for a year. Some children receive all three of these treatments, all designed to help them overcome their academic deficiencies and move them back into the mainstream of their education process.

But according to CRESPAR researchers Karl L. Alexander and Doris R. Entwisle at Johns Hopkins University, none of these first-grade mechanisms, whether employed separately or all together, succeed very well in moving these children back into the mainstream. These students, in fact, disproportionately continue to experience further low tracking throughout their elementary grades and into the sixth grade of middle school.

Examining the elementary school careers and the sixth-grade middle school curriculum placements of students who were in special education, retained, or placed in low reading groups in first grade, Alexander and Entwisle find significant associations between the first-grade practices, placement beyond first grade, and sixth-grade placement. The findings are based on analyses of longitudinal data from the Beginning School Study, which has been monitoring the academic progress and personal development of 790 children who began first grade in 1982 in 20 public schools in a large urban school district.

The first-grade data show the extent of early tracking for these children—more than 16 percent of these students were held back at the end of first grade, 13 percent received special education services in their first or second school years, and 22 percent were classified as being in the lowest group in their classroom in first grade.

Of these students, just over half experienced only one of the three practices, while 15 percent experienced all three: placed in a low reading group, assigned to special education, and held back at year's end.

These children's first-grade experiences put them at greater risk than other students for continued low placement through the elementary grades. For example, almost three-fourths of the children in low first-grade reading groups were retained at some point (over half in first grade)—and 35 percent were retained a second time in elementary school. In comparison, only 12 percent of high first-grade reading group children experienced retention in elementary school.

Children placed in special education were more likely to have to repeat a grade between first and sixth, and were much more likely to repeat two grades (31.5 percent, compared to 9.8 percent of the children who started with them in first grade but who did not get placed in special education).

The same pattern holds for children who were retained in first grade. About 44 percent of these children were retained a second time before getting out of elementary school. Among children who were promoted at the end of first grade, just 6.5 percent were held back for two years during elementary school.

Curriculum Tracking in the Sixth Grade

What happens to these students when they hit sixth grade? First, not all of them hit at the same time, given the heavy retention occurring throughout the elementary grades. Of the 720 total students in the Beginning School Study, sixty-one percent were on-time sixth-graders, 32.3 percent took seven school years to get there, and 4.7 percent took eight years to make it.

Tracking in middle school occurs primarily through the assignment of students to low-level or high-level courses. Alexander and Entwisle find that:

- ***two-thirds of students who were retained in first grade were in low-level English in sixth grade, compared to about one-third of students who had not been retained in first grade;***

- ***61.5 percent of students who were in low reading groups in first grade were in low-level English in sixth grade, compared to 26.3 percent of students who were in high reading groups in first grade;***

- ***students who were retained, in special education, or in low reading groups in first grade were significantly less likely than other students to be taking high-level English, math, or foreign language courses in sixth grade. Students who had been retained in first grade were especially hard hit—only two of these students were in high-level sixth-grade English and only one was in high-level sixth-grade math. In contrast, of children who were not retained in first grade, about 25 percent were in high-level sixth-grade English and about 14 percent were in high-level sixth-grade math.***

Implications

Alexander and Entwisle paint a portrait of a set of elementary school practices that sort first-grade children into low placements through grouping, special education, and retention. The purpose is noble: to provide these children with special attention and practices that will improve their achievement and put them back into the mainstream. The results, however, are ignoble: children who are subjected to these first-grade tracking practices are more likely than other children to simply continue to be retained, to be in special education, to be in low classroom groups, and, in the middle grades, to be tracked into low-level courses.

The elimination of tracking structures, to be replaced by more effective organizational and instructional processes coupled with individual help as required, is a basic tenet of the Talent Development schools envisioned by CRESPAR. Alexander's and Entwisle's findings illustrate the need in urban schools at the elementary

Upcoming Issues

Future issues of the CRESPAR *R &D Report* will continue to describe the implementation and outcomes of Talent Development schools and the research and development that accompanies and supports this work, which is being conducted in the following areas.

Resilience and cultural integrity. Resilient children in elementary, middle, and high schools continue to succeed despite the odds. Center research is examining how these children cope with exposure to violence, how they transition through levels of schooling, and how they function in out-of-school environments. Experimental and naturalistic studies are examining classroom instructional practices and classroom contexts that emphasize the cultural integrity of low-income African-American schoolchildren.

Early education and development. Early intervention programs hold great promise, but children's achievement gains don't stand up over time. Center researchers are examining how effective early intervention coupled with effective elementary school programs could be the key to continued success.

School and classroom interventions. Components of effective education exist at all levels of schooling; most need further specification, more rigorous evaluation, and integration into theory- and research-based comprehensive programs such as the Talent Development models. Center researchers are evaluating the effects of components such as after-school programs, performance assessment, literacy programs, responsive teacher teams, career academies, and so on.

Language minority. Working with schoools to develop and evaluate more effective bilingual education programs, Center researchers are examining curricular interventions, two-way bilingual programs, schools that focus on schoolwide biliteracy, the Spanish version of Success for All, and the use of teacher learning communities in professional development. A series of studies are being carried out on effective American Indian education.

School, family, and community partnerships. This work is concentrating on developing, evaluating, and moving effective programs and practices of school-family-community partnership into use in schools nationwide. A specific program of partnership -- the SAFE START violence prevention program -- addresses the needs of children and families in violence prone communities.

Systemic and policy-related studies. Center researchers are examining how national, state, and local policies can best provide the systemic support that is needed to bring about the widespread implemention of effective Title I programs, exemplary school and district programs, and research-based school improvement models.

MAILER

SUCCESS FOR ALL, ROOTS AND WINGS: Strong Outcomes Continue for Elementary School Students

Success for All is an elementary school restructuring program that stresses prevention and intensive early intervention to ensure that all children can be reading at grade level by the end of third grade. Roots and Wings incorporates the Success for All model and adds achievement of high standards in basic skills in all subjects and immersion of students in simulated and real-life problem solving so they can apply what they learn. In essense, the Roots and Wings/Success for All model exemplifies the CRESPAR Talent Development emphasis at the elementary level of schooling. (See the accompanying box for descriptions of the components of these programs.)

Success for All began to be used as a specific program in six Baltimore and Philadelphia schools in the 1987-88 school year. Now, the program is being used in more than 400 schools nationwide. The development of Roots and Wings began in four disadvantaged elementary schools in Saint Mary's County, Maryland, in the school year 1992-93. Evaluation results are beginning to show major student growth, and the program is expanding to schools in Dade County, Florida, Memphis, Tennessee, and other districts.

Success for All

Seven years of continuous evaluation data are now available from the six original Success for All schools in Baltimore and Philadelphia. Varying numbers of years of data are also available from other Success for All schools in seven other districts. Thus Success for All evaluations cover a total of 23 schools, each with a matched control school, who have been using the program for up to seven years.

Common characteristics of these schools include large percentages of students receiving free lunch, large percentages of African American, Hispanic, or Asian students, and some schools with large percentages of language minority students. Most of the schools are in urban communities; some are in rural. These are, in short, elementary schools whose characteristics indicate that many of their students are at risk of not succeeding in school.

Evaluations at the individual sites show that students in Success for All schools increase their reading performance significantly more than students in their matched control school. In all cases, this performance was measured with reliable and valid instruments—individually administered tests that are sensitive to all aspects of reading: comprehension, fluency, word attack, and word identification.

Multi-Site Replication. CRESPAR researchers at Johns Hopkins (Robert Slavin, Nancy Madden, Lawrence Dolan, and Barbara Wasik), at the University of Memphis (Steven Ross and Lana Smith), and at the Southwest Regional Laboratory (Marcella Dianda, now with the National Education Association) summarize the outcomes from all the schools involved in experimental-control comparisons, over all their years of involvement, by using a method of analysis called a multi-site replicated experiment. In brief, this method combines the effect sizes (a measure of the difference between scores of Success for All students and control group students) for all first-graders, second-graders, and so on in all of the schools.

Figure 1 shows the multi-site comparison of Success for All students and control students on mean reading grade equivalents and reports the effect sizes at each grade level. The comparison clearly shows that Success for All increases student reading performance. In every district in almost every year, Success for All students achieved significantly better than matched control students.

The CRESPAR researchers also report further analyses of the effects of the program which find further positive outcomes. These include:

- The difference between Success for All students' reading scores and control group students' reading scores increases progressively with each year of program implementation. The difference in grade equivalents averages three months at the end of first grade, slightly more than a year by the end of fifth grade. Thus the program has not only an immediate effect on students' reading performance; the effect increases over successive years of use by schools.

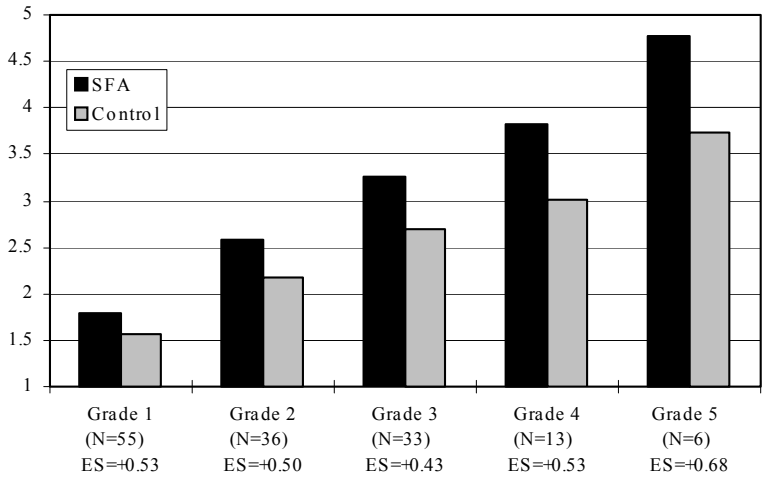
- ESL Asian students, primarily Cambodian, performed far better than their control group counterparts in a school that integrated its ESL program into the Success for All model. These students exceeded their controls in reading grade equivalents by almost three years in third grade, more than two years in fourth grade, and about three years in fifth grade. Non-Asian students at this Success for All school also exceeded their controls.

- Evaluations of ***Lee Conmigo,*** the Spanish Success for All curriculum used in bilingual

schools, show substantially positive increases in reading achievement for Spanish-dominant students taught in bilingual classes. Positive effects have also been found in Spanish-dominant students taught in sheltered English programs. In the schools using these adaptations, English-speaking students and students speaking languages other than English or Spanish also exceeded the performance of their control school counterparts.

● Success for All reduces the assignment of elementary school children to special education services. Evaluations consistently find particularly large effects on the reading performance of Success for All students who are initially achieving in the bottom 25 percent of their class—many of these students are thus maintained in their regular classrooms rather than assigned to special education. A study in two Success for All urban schools found that 3.2 percent of students in grades 1 and 2 were referred to special education over a two-year period for learning disabilities or mild mental handicaps; in control schools, 14.3 percent of first- and second-graders were referred.

Figure 1
Comparison of Success for All and Control Schools in Mean Reading Grade Equivalents and Effect Sizes 1988-1994



What Does Impact Really Mean?

We present the numbers—effect sizes and grade equivalents and percentages of students not in special education—as rigorous scientific evidence of impact on the achievement of students. But impact is more than numbers. Impact is children whose early reading achievement will keep them from being tracked in future low-level courses and remediation activities—it is children who will be able to tackle and succeed at tough curricula, who will feel good about themselves and their accomplishments, who will enter and graduate from high school secure in the knowledge of their own capabilities.

The primary impact of these evaluations, according to the CRESPAR Success for All researchers, is in demonstrating that the success of all students can be routinely ensured in schools that are not exceptional or extraordinary and that were not producing much success prior to using the program. The researchers sum up the impact of the evaluation numbers this way: "The demonstration that an effective program can be replicated and can be effective in its replication sites removes one more excuse for the continuing low achievement of children placed at risk in our society."

Roots and Wings

The Roots and Wings program is taking a giant step forward in its evaluation—its effects are being assessed not only on the instruments routinely applied in Success for All evaluations, but also on a tough statewide performance-based test, the Maryland School Performance Assessment Program (MSPAP). Performance-based tests are designed to determine not only what students have learned, but how they can apply what they have learned.

The MSPAP is administered by the state each year at the third-, fifth-, and eighth-grade levels, with eleventh-grade administration yet to be added. MSPAP is the kind of assessment that most states are working toward using as part of their development and alignment of high standards, strong curriculum, and performance-based accountability measures geared to producing systemic change. On the MSPAP, third- and fifth-graders are asked to design and carry out experiments, write compositions in various genres, read and respond to extended passages, use mathematics to solve complex problems, and so on. Student responses are rated by state contractors against well-validated rubrics on a five-point scale.

The four Roots and Wings pilot schools in St. Mary's County showed extraordinary gains from 1993 to 1995 for their third- and fifth-graders on all six MSPAP scales—reading, language, writing, math, science, and social studies.

The State of Maryland also increased over this time period, but far less than the Roots and Wings schools. Averaging across the six scales, the percentage of Maryland third-graders scoring satisfactory or better increased in 1993-95 by 8.6 points, in comparison to a gain of 18.9 for Roots and Wings schools. For fifth-graders, the state gained an average of 6.4 percentage points, while Roots and Wings schools gained 13.0. Roots and Wings schools served many more children in poverty, had three times as many Title I students, and had mobility rates twice the state average.

The evaluation of Roots and Wings is important in documenting positive effects of the program, of course, but it is also important for another reason. This is the first formal evaluation we have conducted using longitudinal data from a new state performance measure. States are moving toward the use of such performance measures, and current Title

I legislation requires that schools adopt similar approaches to assess Title I programs by the year 2000.

Program Components

Success for All

Success for All stresses prevention and intensive early intervention in order to ensure the success of all children in learning to read. The program may differ somewhat in different school sites, depending on each school's needs and resources, but the following components are characteristic of schools implementing the full program:

■ **Pre-kindergarten and kindergarten programs** focus on oral language development, using thematic units, the Story Telling and Retelling (StaR) program, Peabody Language Development Kits, and a variety of curriculum supplements.

■ **The Beginning Reading/Reading Roots curriculum**, initiated in the second semester of kindergarten or the beginning of first grade, emphasizes language skills, the use of interesting "shared stories" that students work on cooperatively, auditory discrimination, and sound blending.

■ **The Beyond the Basics/Reading Wings curriculum**, used from the first reader level through the fifth grade, integrates reading and writing and is centered on the school's or district's basal or literature series, or on novels.

■ **One-to-one tutoring** is provided by certified teacher-tutors. Tutoring is provided in twenty-minute blocks each day to each eligible student.

■ **Students are grouped heterogeneously** for homeroom and most of the school day, but regrouped during 90-minute reading periods at homegeneous reading levels across grades one through three. Tutors are used as reading teachers during this time to reduce class size.

■ **All students are assessed every eight weeks** in order to make new reading group and tutorial placements.

■ **A full-time facilitator** is assigned to work with teachers to implement and monitor the program use.

■ **A Family Support Team** is established to help support parents in ensuring the success of their children. The Team focuses on attendance, coordination of outside social services, parent involvement, and student behavior.

■ **A Building Advisory Committee** is established to help shape program policy and guide program development.

■ **Grade-level teacher teams** meet at least every two weeks to allow for the faculty to problem-solve and support one another.

■ **Staff development** is provided prior to and during the program.

■ **Schools have a commitment** to reducing special education referrals and reducing student retention, to making scheduling adjustments to accommodate grouping and tutoring activities, and to supplementing their libraries to address the needs of the reading curriculum.

Roots and Wings

The Roots and Wings Program incorporates Success for All, and adds an integrated science, social studies, writing, and mathematics curriculum that provides daily opportunities for children to work together to solve simulated and real-life problems using the knowledge they have learned in class. The two major components of this curriculum are WorldLab and MathWings.

■ **In WorldLab,** students engage in elaborate simulations to apply what they are learning in real contexts. The simulations draw from the entire content of grades 1-6 science and social studies, and integrate reading, writing, mathematics, and fine arts with that content. In typical units, students may represent the 13 original colonies and negotiate the United States constitution; they may serve as engineers designing, testing, and marketing efficient vehicles or bicycle helmets; they may become members of a village council in Africa considering how to balance the needs of farmers and herders with those of conservationists; they may become architects in Japan designing earthquake-resistant buildings; they may engage in real activities in their own community—plan a new park, solve urban problems, assess the extent of pollution.

■ **In MathWings**, students in heterogeneous grade 3, 4, and 5 classrooms get actively involved in learning and communicating mathematics through conceptual development, problem solving in real-world applications, and maintenance of necessary mathematical skills. Based on the standards devised by the National Council for Teachers of Mathematics, the curriculum includes solving of complex problems through extensive use of calculators, computers, and manipulatives, hands-on activities in cooperative groups, and frequent performance assessment.